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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,786	01/04/2002	Yasutaka Igari	074129-0492	7236

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EXAMINER	
KOSAR, ANDREW D	

ART UNIT	PAPER NUMBER
1654	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,786	IGARI ET AL.	
	Examiner	Art Unit	
	Andrew D. Kosar	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/4/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

Applicants IDS submitted January 4, 2002 has been considered. References A1 and A4 have been considered to the extent of the provided English Abstract and to the extent they are discussed in the instant specification.

The examiner has cited US 6,740,634 B1 and US 6,756,472 B1 on the enclosed PTO-892. It is noted that they correspond to the US national stage entry of references A1 and A4, respectively.

Specification

The use of the trademark(s), e.g., KYOTORPHIN , THYMOTHYMRIN and DEINOPRHINE (page 7, lines 19-21); KF804Lx2 (page 22, line 21); Tween 80, Tween 60, HCO-60 and HCO-50 (page 39, lines 15-17); EG-40 (page 51, line 18) have been noted in this application. A trademark should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Applicant should capitalize each letter of the word or include a proper trademark symbol, such as ™ or ® following the word. Further, language such as "the product X (a descriptive

name) commonly known as Y (trademark)" is impermissible, since such language does not bring out the fact that the latter is a trademark. Language such as "the product X (a descriptive name) sold under the trademark Y" is permissible. See MPEP § 608.01 (v).

Claim Objections

Claim1 is objected to because of the following informalities: While it is clear that Applicant is claiming a set range of 1,200,000 to 3,000,000, the claim should recite such without parenthesis, e.g. ... from 1,200,000 to 3,000,000.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 21 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for therapeutic agents or a contraceptive or a prophylactic for dysmenorrhea, does not reasonably provide enablement for other prophylactic agents. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

The factors to be considered in determining whether a disclosure meets the enablement requirements of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir., 1988). The court in Wands states, "Enablement is not precluded by the necessity for some experimentation, such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue', not 'experimentation'" (Wands, 8 USPQ2sd 1404). Clearly, enablement of a claimed invention cannot be predicated on the basis of quantity of experimentation required to make or use the invention. "Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations" (Wands, 8 USPQ2d 1404). Among these factors are: (1) the nature of the invention; (2) the breadth of the claims; (3) the state of the prior art; (4) the predictability or unpredictability of the

art; (5) the relative skill of those in the art; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary.

While all of these factors are considered, a sufficient amount for a *prima facie* case is discussed below.

(1) The nature of the invention and (2) the breadth of the claims:

The claims are drawn to a prophylactic or therapeutic agent against prostate cancer, prostate hyperplasia, endometriosis, hysteromyoma, metrofibroma, precocious puberty, mammary cancer, or a contraceptive. Thus, the claims taken together with the specification imply the composition containing an LHRH derivative will treat or prevent all of the conditions, as well as act as a contraceptive.

(3) The state of the prior art and (4) the predictability or unpredictability of the art:

Hysteromyoma and metrofibroma cannot be prevented (*see Uterine fibroids*, page 4). Early puberty (precocious puberty) is "often unpreventable" (*see Early puberty*, page 2). Prostate hyperplasia cannot be prevented (*see BPH*, page 4), nor can prostate cancer (*see Prostate Cancer*, page 3). Endometriosis is unpreventable as is breast cancer (*see Breast Cancer*, page 2).

Since the means for prevention of these conditions remains largely unsolved, means for making a pharmaceutical that is a prophylactic is highly unpredictable.

(6) The amount of direction or guidance presented and (7) the presence or absence of working examples:

Applicant have reasonably demonstrated/disclosed that the claimed compound is useful as a therapeutic agent for treating the recited conditions, as well as being a contraceptive. The art recognizes that contraceptives are used as preventative treatments (prophylactics) for dysmenorrheal. However, the claims also encompass using the claimed compound to prevent the

prostate cancer, prostate hyperplasia, endometriosis, hysteromyoma, metrofibroma, precocious puberty and mammary cancer, which is clearly beyond the scope of the instantly disclosed/claimed invention. Please note that the terms "prophylactic" and "prevent" are an defined to stop from occurring and, thus, requires a higher standard for enablement than does "therapeutic" or "treat", especially since it is notoriously well accepted in the medical art that the vast majority of afflictions/disorders suffered by mankind cannot be totally prevented with current therapies (other than certain vaccination regimes) – including preventing such disorders as prostate cancer, prostate hyperplasia, endometriosis, hysteromyoma, metrofibroma, precocious puberty and mammary cancer, which are clearly not recognized in the medical art as being a totally preventable condition.

(8) The quantity of experimentation necessary:

Considering the state of the art as discussed by the references above with regards to the inability to prevent the conditions and the lack of guidance provided in the specification, one of ordinary skill in the art would be burdened with undue experimentation to make a prophylactic for the recited conditions, commensurate with the claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, "wherein the product of the weight average molecular weight...", which is unclear and indefinite. It is unclear as to what the product is defining and how one calculates the number, i.e. is it based purely upon the numeric value of the average weight and μmoles (a

unitless calculation), and if so, what is the original base unit that one would use for the polymer, are the units of mass all in grams, and does the result have an attached unit? For example, if the calculation is:

$$\frac{\text{(Avg MW of polymer)}}{\text{(μmol[COOH] / g polymer)}} = 1{,}200{,}000<x<3{,}000{,}000$$

without an identified unit for the Avg MW of the polymer, one would not be able to discern one result from another, and thus the claims are indefinite.

Claims 6 and 7 recite the limitation "100/0" in describing the ratio of lactic acid to glycolic. There is insufficient antecedent basis for this limitation in the claim. Claim 1, from which they each depend, does not allow for a polymer which is only lactic acid, as is the case when the ratio is 100/0.

Claim 21 recites, "A prophylactic or therapeutic agent against... or a contraceptive containing a sustained release composition..." It is unclear whether the contraceptive is the only sustained release composition, or whether all members of the claim contain a sustained release composition. Furthermore,

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-23 are rejected under 35 U.S.C. 102(a) as being anticipated by HATA (JP 11-269094, English Translation provided).

Applicant cannot rely upon the foreign priority papers (JP11-201887) to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

The instant claims are drawn generally to a sustained release composition comprising a hydroxynaphthoic acid, a PLA-PGA polymer and a pharmacologically active compound and a method of making said composition.

Hata teaches a sustained release composition comprising a hydroxynaphthoic acid, a PLA-PGA polymer and a physiological active substance (claim 6), where the PLA/PGA ratio is 100/0 to 40/60 % (claim 7), is 100/0 (claim 8), where the weight average MW is 3,000-100,000 (claim 9), and 20,000 to 50,000 (claim 10) and where the amount of terminal carboxyl groups is 50-90 (claim 12).

Hata teaches that the hydroxynaphthoic acid is 3-hydroxy-2-naphthoic acid (claim 4). Hata teaches that there are only 14 isomers of the naphthoic acid and that any one could be used, noting that the 3-hydroxy-2-naphthoic acid, 1-hydroxy-2-naphthoic acid, and 2-hydroxy-1-naphthoic acid are preferred (paragraph [0011], page 4). Because there are so few members of the hydroxynaphthoic acid family explicitly recited, one could envisage each member individually.

Hata teaches that the pharmacologically active substance is an LHRH derivative (claims 3 and 11), at a ratio of 3:4 to 4:3 with the hydroxynaphthoic acid (claim 13), wihere the content

of the LHRH derivative is 14 to 24 % (w/w) (claim 14), and where the physiologically active substance is slightly water soluble or water soluble (claim 15). Hata teaches that the composition is an injection (claim 16).

Hata teaches that the compounds are prepared by removing a solvent from the mixed liquor of a physiologically active substance, a biodegradable polymer and a hydroxynaphthoic acid (claim 17), where the organic solvent is first mixed then removed (claim 18) and where the physiologically active substance is in an aqueous solution (claim 19) and as a salt with a free acid or base (claim 20).

Hata teaches that the compound is used in the treatment or prevention of prostatic cancer, prostatomegaly, endometriosis, fibroid, metrofibroma, precocious puberty, dysmenorrhea, breast cancer or as a contraceptive. (claim 23).

Because the composition meets all of the structural limitations, it would necessarily possess the function of release over at least 6 months.

Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by SAIKAWA (US Patent 6,740,634 B1).

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The instant claims are presented *supra*.

Saikawa teaches a sustained release composition comprising a hydroxynaphthoic acid; a PLA-PGA polymer and a physiological active substance (claim 5), where the PLA/PGA ratio is

100/0 to 40/60 % (claim 6), is 100/0 (claim 7), where the weight average MW is 3,000-100,000 (claim 8), and 20,000 to 50,000 (claim 9) and where the amount of terminal carboxyl groups is 50-90 (claim 11).

Saikawa teaches that the hydroxynaphthoic acid is 3-hydroxy-2-naphthoic acid (claim 3). Saikawa teaches that there are only 14 isomers of the naphthoic acid and that any one could be used, noting that the 3-hydroxy-2-naphthoic acid, 1-hydroxy-2-naphthoic acid, and 2-hydroxy-1-naphthoic acid are preferred (column 5, lines 40-46 and column 6, lines 1-3). Because there are so few members of the hydroxynaphthoic acid family explicitly recited, one could envisage each member individually.

Saikawa teaches that the pharmacologically active substance is an LHRH derivative (claims 2 and 10), at a ratio of 3:4 to 4:3 with the hydroxynaphthoic acid (claim 12), wihere the content of the LHRH derivative is 14 to 24 % (w/w) (claim 13), and where the physiologically active substance is slightly water soluble or water soluble (claim 14). Saikawa teaches that the composition is intended for injection (claim 15).

Saikawa teaches that the compounds are prepared by removing a solvent from the mixed liquor of a physiologically active substance, a biodegradable polymer and a hydroxynaphthoic acid where the organic solvent is first mixed then removed and where the physiologically active substance is in an aqueous solution and as a salt with a free acid or base (Modes of Embodiment of the invention, throughout). "The thus-obtained organic solvent solution containing a biologically active substance or salt thereof, a hydroxynaphthoic acid or salt thereof and a biodegradable polymer is then added to a water phase..." (column 14, line 65+) "Organic solvent

removal can be achieved by commonly known methods or methods based thereon." (column15, lines 60-61)

Saikawa further teaches preparation in a W/O/W method (column 17, lines 13-63) where the active agent is in an aqueous solution (e.g. lines 31-39).

Saikawa teaches that the compound is used in the treatment of prostatic cancer, prostatic hypertrophy, endometriosis, hysteromyoma, metrofibroma, precocious puberty, dysmenorrhea, or breast cancer (claim 16) or to reduce fertility (claim 18).

Because the composition meets all of the structural limitations, it would necessarily possess the function of release over at least 6 months.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 and 20-23 are rejected on the ground of nonstatutory double patenting over claims 1-18 of SAIKAWA (U. S. Patent No. 6,740,634 B1, *supra*) since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

The instant claims are drawn generally to a sustained release composition comprising a hydroxynaphthoic acid, a PLA-PGA polymer and a pharmacologically active.

Saikawa teaches a sustained release composition comprising a hydroxynaphthoic acid, a PLA-PGA polymer and a physiological active substance (claim 5), where the PLA/PGA ratio is 100/0 to 40/60 % (claim 6), is 100/0 (claim 7), where the weight average MW is 3,000-100,000 (claim 8), and 20,000 to 50,000 (claim 9) and where the amount of terminal carboxyl groups is 50-90 (claim 11).

Saikawa teaches that the hydroxynaphthoic acid is 3-hydroxy-2-naphthoic acid (claim 3). Saikawa teaches that there are only 14 isomers of the naphthoic acid and that any one could be used, noting that the 3-hydroxy-2-naphthoic acid, 1-hydroxy-2-naphthoic acid, and 2-hydroxy-1-naphthoic acid are preferred (column 5, lines 40-46 and column 6, lines 1-3). Because there are so few members of the hydroxynaphthoic acid family explicitly recited, one could envisage each member individually.

Saikawa teaches that the pharmacologically active substance is an LHRH derivative (claims 2 and 10), at a ratio of 3:4 to 4:3 with the hydroxynaphthoic acid (claim 12), wihere the content of the LHRH derivative is 14 to 24 % (w/w) (claim 13), and where the physiologically

active substance is slightly water soluble or water soluble (claim 14). Saikawa teaches that the composition is intended for injection (claim 15).

Saikawa teaches that the compound is used in the treatment of prostatic cancer, prostatic hypertrophy, endometriosis, hysteromyoma, metrofibroma, precocious puberty, dysmenorrhea, or breast cancer (claim 16) or to reduce fertility (claim 18).

Conclusion

NO CLAIMS ARE ALLOWED.

The prior art made of record on the attached PTO-892 and not relied upon in any rejection is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew D. Kosar whose telephone number is (571)272-0913. The examiner can normally be reached on Monday - Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on (571)272-0974. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2/27/06
ANISH GUPTA
PRIMARY EXAMINER

Andrew D. Kosar, Ph.D.
Art Unit 1654